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WATER ALLOCATION PROGRAM DEVELOPMENT STREAMFLOW STANDARDS SUBCOMMITTEE MEETING

MINUTES OF MEETING

June 9, 2003

Present: Alicia Good, Ralph Abele, Al Bettencourt, Rich Blodgett, Jim Campbell, Kathy Crawley, Steve Donohue, John Hermance, Eugenia Marks, Eugene Pepper, Elizabeth Scott, Harold Ward, Carlene Newman, Alisa Richardson

Handouts:

by DEM:

- draft minutes to Mar. 17, 2003 and May 12, 2003 meetings for acceptance
- draft guiding principles for the streamflow standard subcommittee
- overview of streamflow setting methods and how they may be applied - flowchart

Approval of Minutes:

Draft minutes from March 17, 2003 meeting were finalized as revised based on comments from the WRB. The minutes to the May 12, 2003 meeting were finalized with minor revision.

Guiding Principles for Flow Standards Subcommittee:

These guiding principles were developed based on discussions at earlier meetings that we use the best science and that this group's goal is to make recommendations to the WAPAC. Any regulatory standard adoption would be a separate process from the responsibilities of this subcommittee.

It was felt that even though this process is not regulatory in nature, a standard is designed to support regulation. Therefore specifics of the regulations, such as interim vs. long-term and an understanding of how the standard would be applied, must be considered in order to know what would be the best science for that application. There was also discussion on who would define maximum sustainable use and how that fits in with Clean Water Act requirements. There was dialogue on how antidegradation policy would be evaluated in relation to flow requirements. All permitting reviews would require a review under the antidegradation policy.

The suggestion was made to change the word "decisions" in the opening statement to "recommendations". After some discussion the subcommittee was in general agreement on this change. DEM will add these guiding principles to the general mission statement for this subcommittee and send it to the subcommittee again to mull over prior to giving it to the full committee.

Discussion of Issues that came up in Technical Review of White Paper for RI-ABF:

The meeting for the technical review of the white paper on the RI-ABF was held on June 2, 2003. There were some issues that came up at the June 2nd meeting that were considered non-technical in nature and were tabled for discussion at the June 9th meeting of the subcommittee, as follows:

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1. Define how the standard will be applied prior to deciding technical merits of standard

It was brought up that in order to evaluate the technical merits of the standard one must know how the standard will be applied, and whether for example, it would be used as an interim or long-term standard. In an effort to explain how DEM perceives the standards could be applied, the Office of Water Resources prepared a flowchart providing an overview of streamflow setting methods and how they may be applied.

In reviewing the flowchart, it was stated that the planning element should also be connected to existing withdrawals or go from management to watershed specific to planning because current planning efforts are using the presumptive standard in the absence of any other waterbody or watershed specific standard. There was a suggestion to combine management and planning in one box. It was suggested that “watershed specific plan” be changed to “watershed specific standard” in the flowchart.

There was a question on how drought fits into this process, would it be covered under an allocation plan? It was explained that CT proposed to balance drought effects between users and rivers.

How the median number, ABF, is “used” was questioned. It was explained that it would be used in planning and permitting. It has been used as a minimum number, i.e. when ABF is reached activity would have to stop. However, as discussed, if ABF is used as a minimum, the median would increase over time because you are never allowing flow to go below the median. This is why the RI-ABF is two-fold, the median and the 4B3. There would be a trigger at ABF with cessation of activity at the 4B3.

It was expressed that streamflow should be a goal and used in watershed management planning, but not be regulatory. As proposed, the 4B3 would be regulatory. The purpose of the standard is to set up numbers and goals that lead to protection of the aquatic resources. It may be possible to go below set number(s) occasionally and still protect aquatic resources; The difficult part is determining how low for how long is acceptable.

The idea was raised that there should be a higher standard for Outstanding National Resource Waters (ONRW). It was explained that any new withdrawal that would affect an ONRW would require review under and compliance with the antidegradation policy. Also, in instances where there is a specific parameter of concern, such as temperature, the best way to assure adequate temperature is through a temperature permit limit in accordance with the water quality regulations.

There was a concern that it is impracticable for the water user to be responsible for monitoring streamflow. Users should report usage which can be evaluated with known streamflow data to assess water availability and/or streamflow depletion. In addition, all user data should be made public. It was also pointed out that the trend to gather data should be through public entities such as DEM, USGS and the Water Resources Board and not through permittees who would be gathering data with a narrow focus. It was explained that in the case of a new withdrawal, there currently is not always adequate streamflow data to evaluate the effect of the withdrawal. In this case, the permittee is required to provide the streamflow data. A comprehensive gaging network that allowed a direct comparison between withdrawals and streamflow would be an optimum situation. However, practically speaking it is not possible to gauge stream responses to all water

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withdrawals. A more practical approach entails hydrologic modeling as is being done for the Pawcatuck, i.e. HSPF and Modflow.

Concern was raised that under the scenario laid out by the flowchart, nothing would happen to existing withdrawals until there are watershed specific standards. It was explained that existing withdrawals are being addressed in the water availability studies that are underway. These studies will determine which basins and/or sub-basins are stressed based on USFWS ABF and 7Q10. Once these stressed basins are identified, better management including conservation can be undertaken to prevent further degradation and possibly improve conditions while more detailed studies are conducted to develop the watershed specific standard for that basin.

The use of the term “withdrawal” in the flow chart was questioned as there are many other factors that affect streamflow such as impervious surface and development which must be included in the management of streamflow. It was decided that the term “withdrawal” be changed to “diversions”.

Any further comments on the flow chart can be sent to Ms. Good. Ralph Abele described some other models that have more than two tiers for streamflow management and said he would provide the subcommittee with them.

2. Trends in water records should be evaluated – should we be trying to reverse trends or let them continue

The observation was made that we were looking at certain gages within the state and focusing on the subset with long periods of record. During that time period consumption has changed with a trend toward more water usage. Should the flows these gages are recording now be the goals for streamflow or do we want to reverse these trends and increase streamflows to where they were at the start of that period of record? It was explained that the main purpose in selecting the gages that were used in the development of the state standard was to try to select gages that do not show a significant impact from water usage. They were considered to be those that are as free flowing or naturally occurring as you can find in this area. The interim presumptive standard is a restorative goal for rivers where high water demands prevent the maintenance of a healthy ecosystem.

3. Carrying capacity

The comment was made that “sustainable”, as it occurs in the mission statement for this subcommittee, can connote a carrying capacity i.e. the amount of water that can be withdrawn while still maintaining a healthy ecosystem. In addition it incorporates the idea that there are choices on how to use water and how the choices should be balanced against one another. When there is an application for a new water use, how is the assessment made as to the ability of the watershed to support additional usage and how would it be implemented in policy? This also takes into account the issues surrounding interbasin transfers. It was explained that this is similar to establishing a safe yield for a watershed; determining the amount of water available for withdrawal with consideration to quantity of water needed to meet ecosystem needs. The USGS is conducting watershed specific water availability studies statewide. USGS’ next step is streamflow statistics analysis which will incorporate impervious coverage as part of a regression equation. In addition, once the HSPF models are completed in the Pawcatuck and Blackstone, land use coverage can be input to show different streamflow responses. Based on the flowchart the watershed specific or presumptive number would be the planning number you would use in

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the models for minimum streamflow. All of the decisions as to who gets to use what water and how much is part of the allocation process. The out of basin transfer subcommittee has recognized that streamflow is an integral part of making out of basin transfer decisions.

4. How would development of streamflow standard relate to drought plans

During times of drought there would be a sharing of water that would vary with drought status. Individual permits would have conditions for conservation and drought management. The water suppliers have drought management plans. The overall drought management scheme would be based on what the priority uses have been determined to be.

Next Steps:

Alisa will be addressing technical issues that came out of technical review of the RI-ABF white paper.

There has been a suggestion to have Piotr Parasiewicz make a presentation on the MesoHabsim modeling techniques as well as his work with CT.

By the meeting in September we need to have a draft report. Our charge is to make recommendation on the three types of streamflow methods. If we are not comfortable as a group making recommendations on using the RI-ABF, we can use the USFWS ABF or we can make no recommendation for the presumptive approach. We also have other tasks in our work plan including identification of data gaps. It was decided that Kathy Crawley would participate and organize this effort with Jim Campbell and John Hermance. Harold Ward would act as a go between with Saul Saila and possibly some students. In addition anyone else who would like to participate is welcome. Ralph Abele volunteered to pull relevant material from Connecticut's effort into a working draft that this subcommittee can work from for the draft recommendations.

Next meeting

Next meeting was left open for Wednesday, July 16th or July 23rd depending on Piotr Parasiewicz' schedule.